



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 11 2015

OFFICE OF CONGRESSIONAL AND
INTERGOVERNMENTAL RELATIONS

The Honorable John Shimkus
Chairman
Subcommittee on Environment and Economy
Committee on Energy and Commerce
House of Representatives
Washington, D.C. 20515

Dear Mr. Chairman:

Enclosed please find the U.S. Environmental Protection Agency's responses to the Subcommittee's Questions for the Record following the January 22, 2015, hearing entitled "EPA's 2014 Final Rule: Disposal of Coal Combustion Residuals from Electric Utilities."

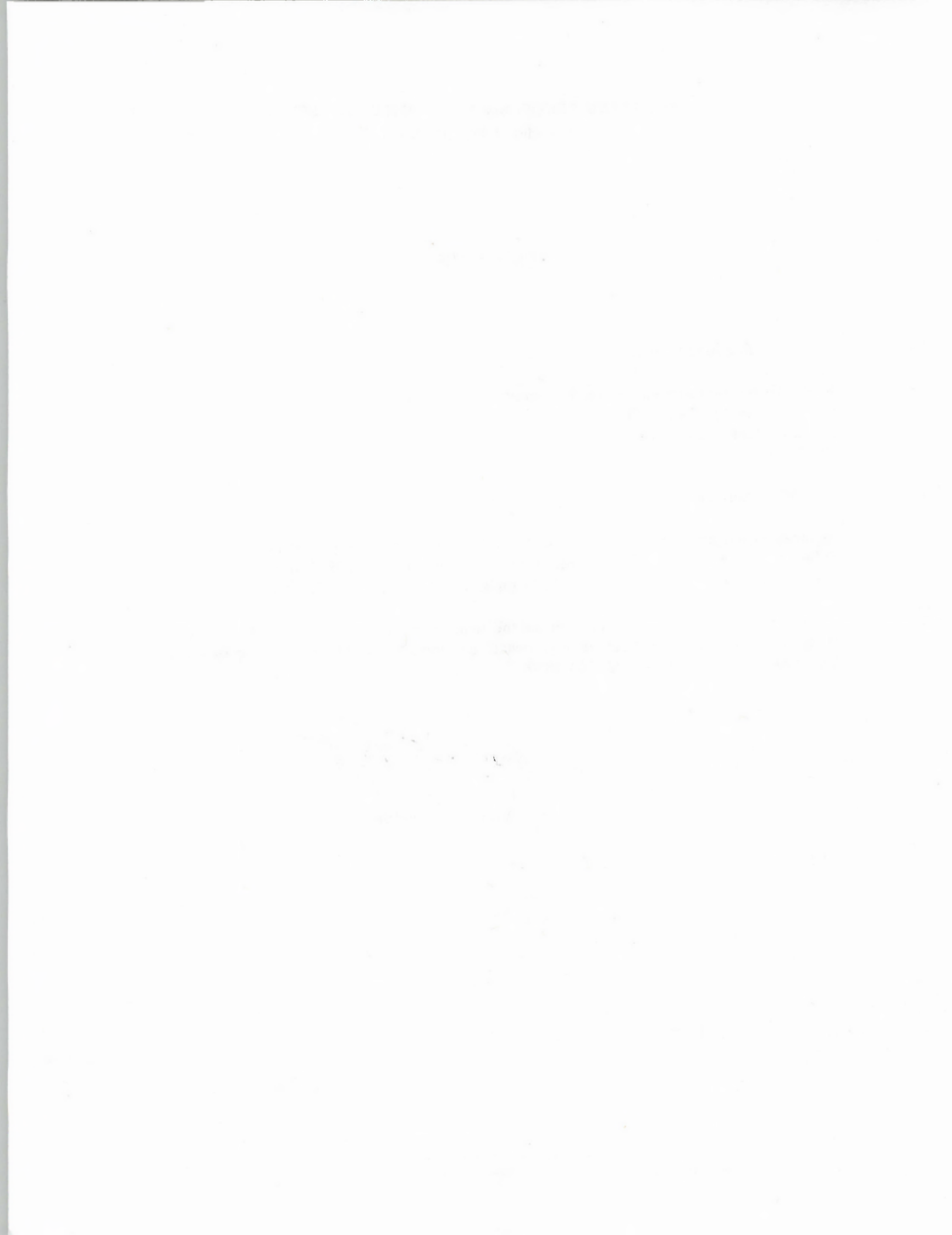
I hope this information is helpful to you and the members of the Subcommittee. If you have further questions, please contact me or your staff may contact Carolyn Levine in my office at levine.carolyn@epa.gov or (202) 564-1859.

Sincerely,

A handwritten signature in black ink, appearing to read "Laura Vaught", is written over the typed name.

Laura Vaught
Associate Administrator

Enclosures



U.S. Environmental Protection Agency
Responses to Questions for the Record
from the
House Energy and Commerce Committee
Subcommittee on Environment and the Economy Hearing
January 22, 2015

The Honorable John Shimkus

1. According to the preamble of the final rule, EPA is “strongly encouraging” States to incorporate the requirements in the final rule by opening up their solid waste management plans.

- a. How many States has EPA talked to about opening/revising their Solid Waste Management Plan to incorporate the final rule?

Answer: The EPA does not have definitive information on the number of states that will or will not revise their solid waste management plans (SWMPs). The EPA is reaching out to all of the states with facilities that handle coal ash and has established a working group with states to address SWMPs and rule implementation. We are working through both our regional network and through collaboration with the Association of State and Territorial Solid Waste Management Officials (ASTSWMO). During our early discussions, states have told the EPA a variety of things:

- Some states have indicated that they do plan to revise their SWMPs to incorporate CCR requirements;
 - Some have indicated that they intend to discuss revising their SWMPs with stakeholders (e.g., the power generation industry) and their public service commissions; They will use information from these discussions to help inform their decision;
 - Some states have indicated that they do not intend to develop new or revised SWMPs. This is because they do not have enough facilities to make revising their SWMPs worth the investment or the state does not have an existing SWMP.
- i. How many States have indicated willingness to revise their plans to incorporate the final rule?
 - ii. If States have indicated they are not willing to open and revise their solid waste management plans, please provide details regarding why they are unwilling to revise the plans.
 - b. Please explain, in detail, the process EPA plans to follow regarding opening and approving State Solid Waste Management Plans to include coal ash, including:
 - i. How long does EPA anticipate it will take to approve State plans?

Answer: The EPA’s CFR Part 256 regulations state that the EPA has six months from the time of the submittal of the revised plan to either approve or disapprove SWMPs.

ii. Please describe in detail the process that will be followed for approving the State plans

Answer: The EPA has been working to develop materials and an efficient process (consistent with the requirements of the CFR Part 256 regulations) for the review/approval of state plans. The agency has developed a checklist of relevant sections of 40 CFR 256 (Guidelines for the Development & Implementation of State Solid Waste Management Plans) that states will be able to consult.

The EPA will review the state's plan to determine how it intends to regulate CCR facilities in the state. The EPA has also developed a checklist of the technical requirements included in the CCR final rule that will be available for the states to consult in developing their revised plans. In order to approve a revised state SWMP, the EPA must, among other things, determine that the state plan provides enforceable regulatory requirements for the closing or upgrading of CCR disposal facilities that constitute open dumps. If the state SWMP incorporates the federal requirements verbatim, it will be straightforward to approve. If the state requirements for CCR facilities are different from the federal regulations, the EPA will compare them and determine if the alternative requirements are at least as protective of public health and the environment as the federal minimum requirements.

iii. Does EPA intend to delegate the authority to approve the revisions to the State plans the Regional offices?

Answer: The EPA regional offices currently have the authority to approve the revisions to the State Solid Waste Management Plans in consultation with EPA headquarters to help ensure national consistency.

c. Many States will need statutory or regulatory changes in order to open the solid waste management plans to incorporate the final rule. How does EPA anticipate that States will be able to incorporate the requirements in time to meet the six month effective date of the final rule?

Answer: The EPA does not necessarily expect the revised plans to be submitted by states before the effective date, which is six months after publication, however, the technical requirements of the rule that facilities must meet varying timelines that are not dependent on state submittal of a revised SWMP. For example, the groundwater monitoring requirements must be met within two years of the effective date. In addition, the EPA's current regulations do not preclude a state from submitting a SWMP for conditional approval based on anticipated regulatory or statutory revisions.

2. The preamble to the final rule states that once "EPA has approved a solid waste management plan that incorporates or goes beyond the minimum federal requirements, EPA expects that facilities will operate in compliance with that plan and the underlying State regulations." However, isn't it true that because the State programs do not operate in lieu of the Federal requirements, that the Federal requirements remain independently enforceable through citizen suits?

a. Because State programs do not operate in lieu of the Federal rule, if the State

comply with both the State rules and the Federal requirements or risk being subject to a citizen suit?

Answer: Once an SWMP is approved, compliance with the state program would be considered as compliance with the federal CCR rule criteria. In addition, we note that RCRA section 7002 requires a citizen group to provide 60 days notification to the EPA and the state prior to filing a suit to enforce the requirements of the CCR rule. States can take a number of actions in response to this notification, including (a) intervening in the suit or (b) filing their own action to enforce compliance with the rule, which would preempt the citizen's action.

3. **The final rule requires that if a constituent of concern is detected above a statistically significant level, that the groundwater protection standard must be set at either the Maximum Contaminant Level or at the background concentration. Whereas, the proposed rule, like the municipal solid waste program, would have allowed the owner or operator to establish an alternative groundwater protection standard based on site-specific conditions.**

- a. **Has EPA considered whether this will impact future and on-going corrective action at coal ash disposal units in States that utilize risk-based decision making?**

Answer: If the Safe Drinking Water Act Maximum Containment Level (MCL) or background-based cleanup levels are lower than a risk-based level the state has used, the federal regulations would require that the corrective action include treating the groundwater to a level lower than the risk-based level. If, however, the MCL or background-based cleanup levels in the federal rules are higher than a risk-based level the state has used, the state regulations would require that the corrective action achieve a level lower than the federal levels. In some cases, it is possible that the corrective action provisions in the final rule would require a more rigorous treatment than required under state law, and in other cases, less rigorous treatment than required under state law. The potential number of these scenarios occurring at corrective actions related to coal ash disposal units is unknown.

- b. **What would be the impact of the final rule on risk-based decision making – in particular, the ability of States to set either an alternative point of compliance or alternate groundwater protection standards?**

Answer: We do not have any information as to how often, to what degree, and under what circumstances alternative points of compliance and groundwater protection standards might be preferred or used by the states.

4. **Please provide the specific legal authority and arguments that EPA believes support the regulation of inactive surface impoundments under Subtitle D.**

Answer: The final rule discusses in depth the specific legal authority on which the EPA is relying to support the regulation of inactive CCR surface impoundments under subtitle D of RCRA. See 80 FR 21342-21347 (Enclosure).

5. **Surface impoundments that are required to close under the final rule are allowed an extension and may continue to operate if there is no on or off-site disposal capacity for the coal ash. Please explain whether EPA also considered the need for alternative disposal capacity for wastewater and why or why not.**

Answer: In the EPA rule, existing CCR surface impoundments are required to close if the unit: (1) is unlined and has exceeded a groundwater protection standard; (2) has failed to meet the applicable location criteria; or (3) has failed to satisfy structural integrity requirements (i.e., attainment of a factor of safety). In the final rule, the EPA acknowledged that facilities subject to closure, may be faced with a decision to either violate the closure requirements of the rule by continuing to place CCR in a unit that is required to close, or stop generating power because there is no place to dispose of the resulting waste. Concluding that neither of these scenarios were desirable, the EPA developed a process for allowing alternative closure timeframes in two narrow circumstances, the first where the owner or operator can certify that CCR must continue to be managed in the unit due to the absence of both on-site and off-site alternative disposal capacity, and the second where the owner or operator of a facility certifies that the facility will cease operation of the coal-fired boilers no later than the dates specified in the rule, but lacks alternative disposal capacity in the interim.

The EPA acknowledged that while it may be possible to find off-site disposal capacity for the dry ash, it may not be feasible to transport to off-site disposal facilities wet generated or sluiced CCR (a combination of water and CCR). Furthermore, the agency also realized that this could be a substantial issue for facilities managing wet CCR because facilities cannot immediately convert to dry handling systems.

The EPA did not consider the need for alternative disposal capacity for wastewater not associated with wet generated or sluiced CCR as part of the CCR rule. As defined in the rule, CCR surface impoundments do not include units generally referred to as cooling water ponds, process water ponds, wastewater treatment ponds, storm water holding ponds, or aeration ponds. These units are not designed to hold an accumulation of CCR, and do not generally contain significant amounts of CCR. Treatment, storage, or disposal of accumulated CCR also does not occur in these units. Such units are not covered by this rule.

However, if a situation arises where multiple waste streams are co-managed in a CCR surface impoundment and there is a possibility that the CCR unit may be required to close, there are several steps owners or operators should consider taking. First, each facility should evaluate all of its waste streams and determine where they are being managed to determine the most appropriate path to compliance. Second, if a facility knows that it has an unlined CCR surface impoundment that may be "leaking", it needs to immediately begin planning for or investigating capacity for all of the waste streams being managed in that CCR unit.

6. **The owner or operator of an impoundment that must close under the final rule has the opportunity to grant itself an extension of the deadline if it can demonstrate that it does not have sufficient on or off-side disposal capacity.**

a. **How far off-site does the facility have to look for alternative disposal capacity?**

Answer: The rule requires the owner or operator to document a claim that no alternative

capacity is available and the claim must be based on the real absence of an alternative and not justified based on the costs or inconvenience of alternative disposal capacity. Furthermore, the preamble goes on to state that, "If any additional capacity is identified, the owner or operator must arrange to use it as soon as it is feasible."

- b. Please explain in detail what EPA intends owners and operators to do with respect to demonstrating whether there is available off-site disposal capacity.

Answer: The CCR rule does not specify how owners or operators must demonstrate whether available off-site disposal capacity exists. The rule does, however, specify that the claim must be based on the genuine absence of alternative capacity and not justified based on the costs or inconvenience of alternative disposal capacity. Furthermore, the preamble goes on to state that, "If any additional capacity is identified, the owner or operator must arrange to use it as soon as it is feasible. If disposal capacity is secured either on- or off-site, the rule does not require the owner or operator to document the availability of this alternative capacity or to document the transfer of CCR to these facilities."

- c. Has EPA assessed the risks of additional truck traffic on the road that will be required to move the coal ash to an off-site disposal facility?

Answer: No, the EPA did not assess these risks because the agency does not have information regarding how much additional off-site disposal might happen as a result of this regulatory provision.

7. In the final rule, EPA provides a new definition of what constitutes "beneficial use" which provides that a user of CCR must demonstrate that environmental releases are comparable to analogous products for an un-encapsulated use of CCR involving placement on the land of 12,400 tons or more in non-roadway applications. Please explain in detail the basis for using 12,400 tons as a threshold.

Answer: The EPA discusses its rationale for selecting the 12,400 tons at length in the preamble to the final rule; this can be found at pages 173-180 of the pre-publication version of the final rule on EPA's website. In summary, the 12,400 ton threshold corresponds to the smallest size landfill in the agency's database of landfills used in the risk assessment for the final rule (Plant 8752 at 280,830 cubic feet or 12,357 tons assuming a conversion of 88 pounds/cubic feet). As explained on page 180 of the preamble, the EPA selected this threshold as a trigger for requiring an affirmative demonstration by the user that there will be no releases of concern as a result of the land application, because the available information, including the 2014 risk assessment, demonstrates that at these volumes the potential risks are of such significance to warrant regulation. Based on this evidence, the burden then shifts to the potential user to demonstrate that these potential risks do not exist at the particular site or have been adequately mitigated.

8. Does the 12,400 ton-threshold requirement for beneficial use apply to coal ash which is destined for an encapsulated use, for example in concrete. Specifically,
- a. Does the 12,400 ton-threshold apply to piles of coal ash that are awaiting re-use?

b. Does the 12,400 ton-threshold apply on a facility-wide basis?

Answer: The 12,400 ton-threshold does not apply to encapsulated beneficial uses such as concrete. The 12,400 ton-threshold applies only to the fourth criterion in the definition of beneficial use of CCR. This criterion only applies to CCR that will be placed on the land and beneficially used in an unencapsulated, non-roadway use. This threshold is a cumulative amount for an unencapsulated, non-roadway beneficial use in a single location. This provision does not authorize CCR disposal facilities to store CCR in piles on-site, even if the CCR may ultimately be transferred off-site for beneficial use.

The Honorable Frank Pallone, Jr.

Under the Bevill Amendment, EPA has been required to consider specific factors in determining whether to regulate coal ash under Subtitle C of RCRA: (1) the source and volumes of material generated per year; (2) present disposal and utilization practices; (3) potential danger, if any, to human health and the environment from the disposal and reuse of such materials; (4) documented cases in which danger to human health or the environment from surface runoff or leachate has been proved; (5) alternatives to current disposal methods; (6) the costs of such alternatives; (7) the impact of those alternatives on the use of coal and other natural resources; and (8) the current and potential utilization of such materials.¹

1. EPA revisited these eight study factors in the coal ash final rule. Please describe the process EPA went through to gather this information and what EPA found.

Answer: In the proposed rule, the EPA re-examined the eight Bevill study factors in section 8002(n) of RCRA, and solicited comment on its analysis. As discussed in both the proposed and final rules, the key elements (i.e., factors) of the analysis were EPA's risk assessment, the assessment of state programs and the EPA's compilation of CCR damage cases. In response to the proposed rule, the agency received significant comments on the various elements of the analysis and consequently published several Notices of Data Availability (NODAs) presenting new data and possible revisions to the analysis.

However, as discussed at length in the preamble to the final rule, critical information necessary to a final Regulatory Determination is still lacking on a number of key technical and policy questions. This includes information needed to quantify the risks of CCR disposal, and the potential impacts of recent agency regulations on the chemical composition of CCR. The agency also needs further information on the adequacy of the state programs.

In the absence of this information, the EPA is unable to reach a conclusion on the issue that is central to a Bevill Determination: whether the risks presented by management of CCR waste

¹ 42 U.S.C. § 6982(n)

streams can only be adequately mitigated through regulation under RCRA subtitle C. Therefore, the EPA deferred a final Regulatory Determination for these wastes.

2. What factors weighed most heavily on EPA's decision?

The final rule identified technical uncertainties that cannot be resolved, including the extent to which risks are managed sufficiently under the final rule.

Answer: Of the eight statutory Bevill study factors assessed, three weighed the most heavily in the agency's decision to defer a final Regulatory Determination: (1) the extent of the risks posed by mismanagement of CCR; (2) the adequacy of state programs to ensure proper management of CCR; and (3) the extent and nature of damage cases.

3. What information will EPA gather over the next several years to resolve these technical uncertainties?

Answer: Over the next several years, electric utilities will be moving forward in the implementation of this rule as well as the Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category (the ELG rule) and the Carbon Pollution Emission guidelines for Existing Stationary Sources; Electric Utility Generating Units Clean Power Plan) rules.

Until these regulatory requirements are implemented, it is premature to define a path forward for resolving the technical uncertainties identified in the final rule. A reasonable course, however, would be to follow the groundwater monitoring data and other information being posted to companies' websites to see what facilities, CCR landfills, and CCR surface impoundments continue operating, whether liners are leaking, what concentrations of contaminants we are observing. Any information that the EPA gathers in the future will be announced to the public and offered for public comment.

4. How will the experience of states implementing the new final rule inform EPA's future analysis?

The final rule also identified the possibility that concentrations of hazardous contaminants in coal ash may rise in the near future.

Answer: The EPA recognizes the critical role that our state partners play in the implementation and ensuring compliance with the regulations, and the agency expects that states will be active partners in overseeing the regulation of CCR landfills and CCR surface impoundments. Any future analysis will account for the states' implementation of the final rule, including any revisions to state programs adopted in response to the final rule. In this regard, the EPA is strongly encouraging states to adopt these federal minimum criteria into their regulations and revise their solid waste management plans (SWMPs) to incorporate these revised federal requirements.

For those states that choose to submit revised SWMPs, the EPA will review and approve those revised SWMPs, provided they demonstrate that the minimum federal requirements

have been met. The EPA expects that the information developed as part of this process will help the agency better understand the full extent of a state's regulatory authority over the disposal of CCR and the manner in which states will implement this oversight.

The final rule also identified the possibility that concentrations of hazardous contaminants in coal ash may rise in the near future.

5. Why might that happen? What actions might be necessary if that happens?

Answer: In the final rule, the EPA specifically noted that there were uncertainties regarding the evolving characterization and composition of CCR due to electric utility upgrades and retrofits of multi-pollutant control technologies and raised concern that these advances in human health and environmental protection could present new or otherwise unforeseen changes in CCR. Therefore, if the agency determines at some future time that significant changes have occurred in the characterization or composition of CCR as a result of these increased air pollution control efforts, the EPA will then make a determination on how state programs are addressing those risks and whether additional risk analyses are warranted. This determination may be strongly influenced by the monitoring of facility groundwater data to determine if the controls the agency has put in place as a result of this rule are providing the necessary environmental protections. Any action that the agency may consider in the future will be announced to the public and offered for public comment.

Attachment 2—Member Requests for the Record

During the hearing, Members asked you to provide additional information for the record, and you indicated that you would provide that information. For your convenience, descriptions of the requested information are provided below.

The Honorable Gregg Harper

1. If a State determines that there is no human receptor for the groundwater and that a cleanup standard above the MCL or background is appropriate, would that meet the minimum requirements of the rule?

Answer: The rule requires that the groundwater protection standard (either the MCL or the background level, whichever is higher) must be met by the chosen corrective action remedy.

The Honorable Bill Flores

1. When you proposed the application of location restrictions to existing surface impoundments, the EPA acknowledged that these location restrictions would force a majority of the current impoundments to close.

- a. Do you have an estimate of how many will close?

Answer: The EPA's final CCR rule contains five new location restrictions that apply to new and existing waste management units (landfills and surface impoundments). These restrictions include: (1) disposal within 5 feet of the water table, (2) disposal in wetlands, (3) disposal in unstable areas, including karst areas, (4) disposal near active fault zones, and (5) disposal in seismic impact zones. In addition, current subtitle D regulation (40 CFR 257.3-1) already restricts facilities that dispose of wastes in floodplains.

For fault areas, seismic impact zones, and unstable areas (using karst areas as a proxy) the EPA's Regulatory Impact Analysis (RIA) projected that 51 of the 1045 waste management units would be subject to the location restrictions resulting in an estimated 26 waste management units closing and safely relocating off-site. The remaining waste management units are expected to make certifications either that they are not subject to these three location restrictions or that their continued operation in these areas is protective.

The EPA did not have sufficient data to evaluate the number of waste management units subject to the restrictions against disposal units located within 5 feet of the water table or in wetlands. However, in contrast to the proposed rule, the final rule allows facilities to certify that a waste management unit meets an alternate performance standard, even if it cannot meet the requirement in the proposed rule to demonstrate that it is 5 feet above the water table. Similarly, the EPA notes that under the wetlands criterion, facilities have the option of purchasing offsets instead of closing existing units. For this reason, the EPA does not believe that many (if any) facilities will close their waste management units in response to the location restriction for wetlands.

- b. Moving further upstream from those closures, what sort of reliability issues could be imposed on the electric grid?

Answer: Electricity market impacts presented in Appendix X of the RIA were conducted using the Integrated Planning Model (IPM) and include the location restriction costs of the rule as discussed above. The results of this analysis show that there will be negligible impacts to the electric market.

from the MSWLF unit to the groundwater (i.e., as would be the case if CCR was disposed in the MSWLF unit). In determining alternative parameters, the Director shall consider, among other things: (1) The types, quantities, and concentrations in wastes managed at the MSWLF unit; (2) the mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the MSWLF unit; and (3) the detectability of indicator parameters, waste constituents, and reaction products in the groundwater. In situations where the MSWLF unit is receiving CCR for disposal and/or daily cover, EPA expects the controlled management of CCR in these units. Specifically, EPA expects State Directors to utilize the provisions in § 258.54(a)(2) to revise the detection monitoring constituents to include those constituents being promulgated in this rule under § 257.90. These detection monitoring constituents or inorganic indicator parameters are: boron, calcium, chloride, fluoride, pH, sulfate and total dissolved solids (TDS). These inorganic indicator parameters are known to be leading indicators of releases of contaminants associated with CCR and the Agency strongly recommends that State Directors add these constituents to the list of indicator parameters to be monitored during detection monitoring of groundwater if and when a MSWLF decides to accept CCR.

The Agency has concluded that CCR can readily be handled in permitted MSWLFs provided that they are evaluated for waste compatibility and placement as required under the part 258 requirements. Furthermore, consistent with the recordkeeping requirements in § 258.29, the Agency further expects State Directors to encourage MSWLF units receiving CCR after the effective date of this rule to do so pursuant to a "CCR acceptance plan" that is maintained in the facility operating record. This plan would assure that the MSWLF facility is aware of the physical and chemical characteristics of the waste received (i.e., CCR) and handles it with the additional precautions necessary to avoid dust, maintain structural integrity, and avoid compromising the gas and leachate collection systems of the landfill so that human health and the environment are protected. While the Agency sees no need to impose duplicative requirements for MSWLFs that receive CCR for disposal or daily cover, development of these acceptance plans as well as a revised list of

groundwater detection monitoring constituents will help ensure that CCR is being managed in the most protective manner consistent with the Part 258 requirements.

5. Inactive CCR Surface Impoundments

The final rule also applies to "inactive" CCR surface impoundments at any active electric utilities or independent power producers, regardless of the fuel currently being used to produce electricity; i.e., surface impoundments at any active electric utility or independent power producer that have ceased receiving CCR or otherwise actively managing CCR. While it is true that EPA exempted inactive units from the part 258 requirements in 1990, the original subtitle D regulations at 40 CFR part 257 (which are currently applicable to CCR wastes) applied to "all solid waste disposal facilities and practices" except for eleven specifically enumerated exemptions (none of which are relevant). 40 CFR 257.1(c). See also, 40 CFR 257.1(a)(1)–(2). And as discussed in greater detail below, subtitle D of RCRA does not limit EPA's authority to active units—that is, units that receive or otherwise manage wastes after the effective date of the regulations. EPA has documented several damage cases that have occurred due to inactive CCR surface impoundments, including the release of CCR and wastewater from an inactive CCR surface impoundment into the Dan River which occurred since publication of the CCR proposed rule. As discussed in the proposal, the risks associated with inactive CCR surface impoundments do not differ significantly from the risks associated with active CCR surface impoundments; much of the risk from these units is driven by the hydraulic head imposed by impounded units. These conditions remain present in both active and inactive units, which continue to impound liquid along with CCR. For all these reasons, the Agency has concluded that inactive CCR surface impoundments require regulatory oversight.

The sole exception is for "inactive" CCR surface impoundments that have completed dewatering and capping operations (in accordance with the capping requirements finalized in this rule) within three years of the publication of this rule. EPA considers these units to be analogous to inactive CCR landfills, which are not subject to the final rule. As noted, EPA's risk assessment shows that the highest risks are associated with CCR surface impoundments due to the hydraulic head imposed by impounded water.

Dewatered CCR surface impoundments will no longer be subjected to hydraulic head so the risk of releases, including the risk that the unit will leach into the groundwater, would be no greater than those from CCR landfills. Similarly, the requirements of this rule do not apply to inactive CCR landfills—which are CCR landfills that do not accept waste after the effective date of the regulations. The Agency is not aware of any damage cases associated with inactive CCR landfills, and as noted, the risks of release from such units are significantly lower than CCR surface impoundments or active CCR landfills. In the absence of this type of evidence, and consistent with the proposal, the Agency has decided not to cover these units in this final rule.

Under both the subtitle C and subtitle D options, EPA proposed to regulate "inactive" CCR surface impoundments that had not completed closure prior to the effective date of the rule. EPA proposed that if any inactive CCR surface impoundment had not met the interim status closure requirements (i.e., dewatered and capped) by the effective date of the rule, the unit would be subject to all of the requirements applicable to CCR surface impoundments. Under the subtitle C option, those requirements would have included compliance with the interim status and permitting regulations. Under subtitle D, such units would have been required to comply with all of the criteria applicable to CCR surface impoundments that continued to receive wastes, including groundwater monitoring, corrective action, and closure.

EPA acknowledged that this represented a departure from the Agency's long-standing implementation of the regulatory program under subtitle C. While the statutory definition of "disposal" has been broadly interpreted to include passive leaking, historically EPA has construed the definition of "disposal" more narrowly for the purposes of implementing the subtitle C regulatory requirements. For examples see 43 FR 58984 (Dec. 18, 1978); and 45 FR 33074 (May 1980). Although in some situations, post-placement management has been considered to be disposal triggering RCRA subtitle C regulatory requirements, e.g., dredging of impoundments or management of leachate, EPA has generally interpreted the statute to require a permit only if a facility treats, stores, or actively disposes of the waste after the effective date of its designation as a hazardous waste. EPA explained that relying on a broader interpretation was appropriate in this instance given that the

substantial risks associated with currently operating CCR surface impoundments, *i.e.*, the potential for leachate and other releases to contaminate groundwater and the potential for catastrophic releases from structural failures, were not measurably different than the risks associated with "inactive" CCR surface impoundments that continued to impound liquid, even though the facility had ceased to place additional wastes in the unit. EPA noted as well that the risks are primarily driven by the older existing units, which are generally unlined.

In the section of the preamble discussing the subtitle D option, EPA did not expressly highlight the application of the rule to inactive CCR surface impoundments, but generally explained that EPA's approach to developing the proposed subtitle D requirements for surface impoundments (which are not addressed by the part 258 regulations that served as the model for the proposed landfill requirements) was to seek to be consistent with the technical requirements developed under the subtitle C option. (See 75 FR 35193.) ("In addition, EPA considered that many of the technical requirements that EPA developed to specifically address the risks from the disposal of CCR as part of the subtitle C alternative would be equally justified under a RCRA subtitle D regime. . . . The factual record—*i.e.*, the risk analysis and the damage cases—supporting such requirements is the same, irrespective of the statutory authority under which the Agency is operating. . . . Thus several of the provisions EPA is proposing under RCRA subtitle D either correspond to the provisions EPA is proposing to establish for RCRA subtitle C requirement. These provisions include the following regulatory provisions specific to CCR that EPA is proposing to establish: *Scope and applicability (i.e., who will be subject to the rule criteria/requirements)*. . . .") (emphasis added).

EPA received numerous comments on this aspect of the proposal. On the whole, the comments were focused on EPA's legal authority under subtitle C to regulate inactive and closed units, as well as inactive and closed facilities. One group of commenters, however, specifically criticized the proposed subtitle D regulation on the grounds that it failed to address the risks from inactive CCR surface impoundments. The majority of commenters, however, argued that RCRA does not authorize EPA to regulate inactive or closed surface impoundments. These commenters focused on two primary arguments: first, that RCRA's definition of "disposal" cannot be interpreted to

include "passive migration" based on the plain language of the statute, and second, that such an interpretation conflicted with court decisions in several circuits, holding that under CERCLA "disposal" does not include passive leaking or the migration of contaminants.

In support of their first argument, commenters argued that the plain language of RCRA demonstrates that the requirements are "prospective in nature" and thus cannot be interpreted to apply to past activities, *i.e.*, the past disposals in inactive CCR units. They also argued that the absence of the word "leaching" from the definition of "disposal" clearly indicates that Congress did not intend to cover passive leaking or migration from CCR units. The commenters also selectively quoted portions of past EPA statements, claiming that these demonstrated that EPA had conclusively interpreted RCRA to preclude jurisdiction over inactive units and facilities. In particular, they pointed to EPA's decision in 1980 not to require permits for closed or inactive facilities.

Commenters cited several cases to support their second claim. These include *Carson Harbor Vill. v. Unocal Corp.*, 270 F.3d 863 (9th Cir. 2001); *United States v. 150 Acres of Land*, 204 F.3d 698, 706 (2000); *ABB Industrial Systems v. Prime Technology*, 120 F.3d 351, 358 (2d Cir. 1997); *United States v. CMDG Realty Co.*, 96 F.3d 706, 711 (3rd Cir. 1996); *Joslyn Mfg. Co. v. Koppers Co.*, 40 F.3d 750, 762 (5th Cir. 1994); *Delaney v. Town of Carmel*, 55 F. Supp. 2d 237, 256 (S.D.N.Y. 1999); *see also Interfaith Cmty. Org. v. Honey-Well Intl Inc.*, 263 F. Supp. 2d 796, 846 n.10 (D.N.J. 2003). The commenters acknowledged that these cases were all decided under CERCLA, but claim that the cases are all equally dispositive with respect to RCRA's definition of disposal because CERCLA specifically incorporates by reference RCRA's statutory definition of disposal.

As an initial matter, it is important to correct certain misunderstandings contained throughout a number of the comments. First, EPA did propose to include inactive units under the subtitle D alternative. EPA clearly signaled its intent to cover the same universe of units and facilities covered under the subtitle C proposal. EPA did not include a corresponding discussion in its explanation of the subtitle D alternative because application of the criteria to inactive units did not represent such a significant departure from EPA's past practice or interpretation. As discussed in more detail below, the original subtitle D regulations applied to all

existing disposal units. See 40 CFR 257.1(a)(1)–(2), (c) and 43 FR 4942–4943, 4944.

Second, several commenters criticized EPA's purported proposal to cover both "closed" and "inactive" surface impoundments, using the terms interchangeably. These same commenters also refer to both "inactive facilities" and "inactive units." These are all different concepts, and EPA clearly distinguished between them.

EPA proposed to regulate only "inactive" surface impoundments that had not completed closure of the surface impoundment before the effective date. "Inactive" surface impoundments are those that contain both CCR and water, but no longer receive additional wastes. By contrast, a "closed" surface impoundment would no longer contain water, although it may continue to contain CCR (or other wastes), and would be capped or otherwise maintained. There is little difference between the potential risks of an active and inactive surface impoundment; both can leak into groundwater, and both are subject to structural failures that release the wastes into the environment, including catastrophic failures leading to massive releases that threaten both human health and the environment. This is clearly demonstrated by the recent spill in the Dan River in North Carolina, which occurred as the result of a structural failure at an inactive surface impoundment. Similarly, as demonstrated by the discovery of additional damage cases upon the recent installation of groundwater monitoring systems at existing CCR surface impoundments in Michigan and Illinois, many existing CCR surface impoundments are currently leaking, albeit currently undetected. These are the risks the disposal rule specifically seeks to address, and there is no logical basis for distinguishing between units that present the same risks.

EPA did not propose to require "closed" surface impoundments to "reclose." Nor did EPA intend, as the same commenters claim, that "literally hundreds of previously closed . . . surface impoundments—many of which were properly closed decades ago under state solid waste programs, have changed owners, and now have structures built on top of them—would be considered active CCR units." Accordingly, the final rule does not impose any requirements on any CCR surface impoundments that have in fact "closed" before the rule's effective date—*i.e.*, those that no longer contain water and can no longer impound liquid.

Further, EPA never proposed that the rule would apply to inactive facilities. The proposal was clear that the regulations would apply to active facilities—i.e., those that continue to generate electricity for distribution to the public, and those that continue to manage CCR. Consistent with that proposal, the final rule applies only to inactive surface impoundments at active electric utilities, i.e., facilities that are actively generating electricity irrespective of the fuel used.

Finally, some comments focused on issues that were specific to the plain language of subtitle C provisions. While most of the issues the commenters raised relate equally to EPA's authority under both subtitles C and D, because the final rule establishes standards under subtitle D of RCRA, EPA has not addressed comments that are purely relevant or applicable to the extent of EPA's authority under subtitle C.

a. Plain Language of RCRA and EPA's Past Interpretations

Under both subtitle C and subtitle D, EPA's authority to regulate "inactive" units primarily stems from the agency's authority to regulate "disposal." The term is defined once in RCRA and applies to both subtitles C and D. Moreover, the definition explicitly includes "leaking" and "placing of any solid waste . . . into or on any land so that such [waste] or any constituent thereof may enter the environment . . . or be discharged into any waters, including groundwaters." 42 U.S.C. 6903(3).

Commenters focused on the past statements that EPA cited in the proposal in acknowledging that the Agency was proposing to revise its interpretation for this rulemaking. In general, the comments misconstrue the significance of these past statements. The cited passages merely explain that the *permitting requirements* in subtitle C were written to be "prospective in nature" and as a consequence, EPA has chosen to interpret "disposal" more narrowly *in that context*. Thus EPA's historic interpretation under subtitle C was not based on an interpretation that the plain language of RCRA's definition of "disposal" precluded reaching inactive units, but on a determination that a narrower interpretation would be reasonable in light of specific language in sections 3004 and 3005, and the practical consequences of applying these requirements to inactive facilities.⁴⁰

⁴⁰ It is also clear that certain subtitle C requirements in fact do apply to inactive units, for example, section 3004(n) requires facilities to clean

up releases from inactive units located on the facility site.

None of EPA's past statements included any interpretation that "leaking" does not include leaking from an inactive disposal unit, or that the statutory definition of "disposal" cannot be interpreted to apply to the current consequences of past disposals. To the contrary, EPA was clear in the original 1978 proposed hazardous waste regulations that leaking from inactive disposal units constitutes "disposal" under RCRA.

Neither RCRA nor its legislative history discusses whether section 3004 standards for owners and operators of hazardous waste treatment, storage, or disposal facilities apply or were intended to apply to inactive facilities, i.e., those facilities which have ceased receiving, treating, storing, and disposing of wastes prior to the effective date of the subtitle C regulations. "This is an important issue, however, because some, and perhaps most, inactive facilities may still be 'disposing of waste' within the meaning of that term in Section 1004(3) of RCRA. 'Disposal' includes: the discharge, dumping, spilling, leaking, . . . of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including groundwaters. *Many inactive facilities may well be leaking solid or hazardous waste into groundwater and thus be 'disposing' under RCRA.*" 43 FR 58984 (emphasis added).

Note as well that EPA declined to impose requirements on "inactive facilities" not "inactive units at active facilities," which are the entities covered in this final CCR rule. Further, the complications discussed in 1978 were specific to inactive or closed facilities: the concern that the present owner of the land on which an inactive site was located might have no connection (other than present ownership of the land) with the prior disposal activities. *Id.* These considerations are not relevant to inactive CCR surface impoundments at active electric utilities.

EPA further clarified this position in the 1980 final hazardous waste rule, explaining that, while the Agency did not generally intend to regulate those portions of facilities that had closed before the effective date, there were exceptions to this, and that in individual cases, inactive portions of a facility—or in other words, inactive units, might be regulated.

up releases from inactive units located on the facility site.

[O]wners and operators which continue to operate after the effective date of the regulations must ensure that portions of facilities closed before the effective date of these rules do not interfere with the monitoring or control of active portions. This requirement regulates the facility which operates under the RCRA regulations, although it may require the owner or operator before he receives a permit, or, as a permit condition, to take certain measures on portions of his facility closed before the effective date of these regulations.

45 FR 33068. (See also 45 FR 33170.)

In other words, EPA was clear that its jurisdiction under RCRA extended to these portions of the facility but that the Agency had made a policy choice not to exert its regulatory jurisdiction as a general matter over inactive facilities, choosing instead to rely on section 7003 and CERCLA to address the risks and require clean-up of these sites. EPA has adopted a substantially similar approach here, requiring the current owner or operator of an active facility to address the risks associated with an inactive portion of the facility that could potentially interfere with the monitoring or control of the actively operating portion of the facility through leaking contaminants or other releases.

Similarly, in the 1980 final rules, EPA expressly declined to revise the regulatory definition of disposal to exclude accidental or unintentional releases. EPA noted that "[r]egardless of whether a discharge of hazardous waste is intentional or not, the human health and environmental effects are the same. Thus intentional and unintentional discharges are included in the definition of 'disposal.'" (See 45 FR 33068.) While EPA revised other provisions to clarify that a permit would not be required for accidental discharges, EPA was clear that such activities are properly considered to be "disposal."

By contrast, EPA's past implementation of subtitle D, following from the legislative history and the statutory language, consistently applied regulatory requirements equally to all facilities, without distinguishing between active and inactive or new and existing facilities.

Congress was clear that subtitle D was intended to specifically address the problem of abandoned leaking "open dumps" scattered across the country, "where frequently the use of the site for waste disposal is neither authorized nor supervised." H. Rep. No. 94-1491, p. 37, 94th Cong., 2d Sess (1976). For example, the report described the consequences when "the City of Texarcana Arkansas/Texas, abandoned its six open dumps, in 1968" to support the need to require open dumps to upgrade or close.

Similarly, in describing the need for the legislation, the House report stated:

Disposal of solid wastes, including hazardous wastes, can have adverse environmental impacts in several ways. The following paragraphs discuss five different types of such impacts.

(i) Perhaps the most pernicious effect is the contamination of groundwater by leachate from land disposal of waste. About half of the U.S. domestic water supply is from underground water, and thus is potentially subject to contamination. Such contamination is particularly vexing because often it is discovered after the damage is done and because the contamination is very long lasting. Thus leachate from a landfill or dump may not show up for years, *maybe not even until after the landfill is closed*.

Id. at 89 (emphasis added).

Consequently, subtitle D of RCRA provides clear authority to address inactive or abandoned disposal sites. The relevant provisions of RCRA subtitle D do not distinguish between "active" and "inactive" disposal units. Nor do any of the relevant provisions tie jurisdiction to the receipt or disposal of waste after a specific date.

RCRA section 1004(14) defines an "open dump" as "any facility or site where solid waste is disposed of which is not a sanitary landfill which meets the criteria promulgated under section [4004] of this chapter and which is not a facility for disposal of hazardous waste." 42 U.S.C. 6903(14) (emphasis added). Section 4004(a) delegates broad authority to EPA to determine the facilities that will be considered "open dumps," without any requirement that the units or facilities be in operation. "[T]he Administrator shall promulgate regulations containing criteria for determining which facilities shall be classified as sanitary landfills and which shall be classified open dumps within the meaning of this chapter." 42 U.S.C. 6944(a). Section 4005(a), which is titled, "Closing or upgrading of existing open dumps," is also not limited in scope: "Upon promulgation of criteria under [1008(a)(3)] of this title, any solid waste management practice of disposal of solid waste or hazardous waste which constitutes the open dumping of solid or hazardous waste is prohibited. . . ." 42 U.S.C. 6945(a) (emphasis added). See also, section 4003(a)(3), requiring state plans to provide for the closing or upgrading of "all existing open dumps". 42 U.S.C. 6943(a)(3) (emphasis added).

Consistent with the statutory provisions, EPA's current subtitle D regulations at 40 CFR part 257 apply to "all solid waste disposal facilities and practices" whether active or inactive, and did not differentiate between new

and existing facilities.⁴¹ 40 CFR 257.1(c). See also, 40 CFR 257.1(a)(1)–(2). EPA was clear in both the proposed and final rules that the rules applied to all existing facilities: "These criteria for the classification of disposal facilities apply to all "solid waste" and "disposal" facilities, which are defined in the Act [in] (section 1004)." 43 FR 4942–4943, 4944. The final rule was equally clear: "These criteria apply to the full range of facilities and practices for "disposal" of "solid waste," as those terms are defined in the Act." 44 FR 53440. (See also 44 FR 53438.) The final rule describes eight categories of materials or activities that are excluded; inactive facilities or units are not among them. This stands in stark contrast to the hazardous waste regulations, which, as discussed, specifically exempted inactive facilities from the permitting and associated regulatory requirements.

b. Case Law on the Definition of Disposal

EPA also disagrees with the commenters' second claim that regulating inactive surface impoundments would be inconsistent with case law in six circuits. The commenters are correct that some courts have held that the subsequent passive migration of contamination left on-site is insufficient to support liability against a *third party* that merely owned the property *under CERCLA*. But the commenters misconstrue this case law and fundamentally overstate its significance to the issue at hand. Of greater significance, however, is that federal courts have almost universally reached different conclusions under RCRA, holding that the statutory definition of disposal does include the passive migration of contamination from previously disposed of wastes.

As an initial matter, the issue decided by the courts in the cited CERCLA cases was narrower than the commenters allege; these cases generally focused on whether current or past owners of land contaminated by the activities of *other owners* were liable for passive migration that occurred during their ownership of the land. This is very different than the situation at hand, in which regulatory requirements are being imposed to address the existing and future contamination caused by the past and current activities of the current owner.

In addition, these decisions were largely predicated on language that is unique to CERCLA, rather than on a definitive reading of RCRA's definition

of disposal. See, e.g., *United States v. CMDG Realty Co.*, supra at 712–717. For example, in *CMDG Realty*, the court found that passive migration was not disposal because Congress had clearly distinguished between "releases," and "disposal," defining the two terms differently and imposing liability on different parties for the two activities. Id. *Accord*, *Carson Harbor Village*, supra, at 880–885; *ABB Industrial Systems v. Prime Technology*, supra at 358.

Moreover, even under CERCLA courts have not universally reached the same conclusions on whether "passive migration" can be considered "disposal." See, e.g., *Nurad, Inc. v. William E. Hooper & Sons Co.*, 966 F.2d 837, 844–46 (4th Cir. 1992) (concluding that because the definition of disposal includes "leaking," prior owners are liable if they acquired a site with leaking barrels or underground storage tanks even though the prior owner's actions are purely passive); *ABB Industrial Systems*, Id., n.3 (expressly declining to decide whether passive migration could ever be considered "disposal").

But in any event, courts have consistently interpreted RCRA to apply to passive migration. Two cases under RCRA are the most directly analogous to the current situation as they address the extent of EPA's authority to regulate based on the statutory definition of "disposal": *In re Consolidated Land Disposal Regulation Litigation*, 938 F.2d 1386 (D.C. Cir. 1991), and *United States v. Power Engineering Co.*, 10 F. Supp. 2d 1145 (D. Colo. 1998), *aff'd* 191 F.3d 1224 (10th Cir. 1999). In both cases, the court considered whether EPA could impose or enforce regulatory requirements to address passive migration under the interpretation that this constituted "disposal" under RCRA. And in both cases the court agreed that RCRA's definition encompassed such activities.

The issue in *Consolidated Land Disposal* was whether EPA could require closed hazardous waste facilities to obtain a "post-closure" permit. 938 F.2d at 1388–1389. EPA had relied on the definition of disposal to support the regulation, concluding that a facility "at which hazardous wastes have been disposed by placement in or on the land" remains subject to both permitting and regulation because "such hazardous wastes or constituents may continue 'leaking' or 'may enter the environment or be emitted . . . or discharged . . . into the environment.'" Id. Similar to the commenters' current arguments, the petitioners argued that under § 3005, a permit can only be required for "on-

⁴¹ The regulations establish eleven specifically enumerated exemptions, none of which are relevant to the units at issue.

going activities"—the treatment, storage, or disposal of waste at such facilities—not for the facility itself post-closure. The petitioners argued that linguistically, "disposal . . . is not a continuing activity but occurs anew each time waste is placed into or on land." The D.C. Circuit summarily rejected the petitioners' interpretation, holding that this "may be one way in which the word is used in ordinary language, but is not necessarily how it is used in the statute; the equation of "disposal" with "leaking," which is a continuous phenomenon rather than a discrete event, is enough to blunt the sting of the petitioners' point." *Id.* This case is essentially dispositive of the issue, given the similarities between the requirement for a post-closure permit and the final requirements applicable to inactive CCR surface impoundments. Electric utilities retain ownership and control over these existing CCR units, just as hazardous waste facilities retain ownership and control over the closed units subject to post-closure permitting. In both situations, EPA requirements are designed to address both the existing and future risks of further "releases" or "leaking" from these units—i.e., further disposal, as that term is defined in section 1004.

Similarly, in *Power Engineering* the court considered whether under section 3008 of RCRA, EPA could bring an action to compel the operator of a metal refinishing plant to comply with the state's RCRA regulations relating to financial assurance.⁴² 10 F. Supp.2d at 1159. The defendants argued that since they were not currently disposing of waste, they were operating in compliance with state regulations and were exempt from financial assurance requirements. The court disagreed. It held that the use of the word "leaking" in the definition of "disposal" indicated that the leaching of hazardous waste into the groundwater constitutes the continuing disposal of hazardous waste. *Id.* at 1159–60 ("Because the definition of "disposal" includes the word "leaking," disposal occurs not only when a solid waste or a hazardous waste is first deposited onto ground or into water, but also when such wastes migrate from their initial disposal location.").

Courts in several circuits have also considered whether the passive migration of previously dumped waste constitutes a current or ongoing violation of RCRA, i.e., illegal

"disposal," under the citizen suit provisions of section 7002(a)(1)(A). Most have concluded that it does. *See, Scarlett & Associates v. Briarcliff Center Partners*, 2009 WL 3151089 (N.D. Ga. 2009) (deciding to "follow the majority rule" and holding that "the continued presence of migrating waste constitutes a continuing violation under the RCRA"); *Marrero Hernandez v. Esso Standard Oil Co.*, 597 F. Supp. 2d 272, 283 (D.P.R. 2009) (holding that unremediated, migrating contamination is not a wholly past violation); *Cameron v. Peach County, GA*, No. 5:02–CV–41–1 (CAR), 2004 WL 5520003 (M.D. Ga. 2004) (holding that the continued presence of illegal contamination that remains remedial constitutes a continuing violation, even though the acts of unlawful disposal occurred in the past); *California v. M&P Investments*, 308 F. Supp. 2d 1137, 1146–1147 (E.D. CA 2003) (Allowing RCRA 7002 claim of continuing violation to proceed on evidence that wastes "continue to exist unremediated" as a result of improper discharge that had ceased over 20 years prior to filing of suit); *Aurora National Bank v. TriStar Marketing*, 990 F. Supp. 1020, 1025 (N.D. Ill. 1998) ("Although subsection (a)(1)(A) does not permit a citizen suit for wholly past violations of the statute, the continued presence of illegally dumped materials generally constitutes a 'continuing violation' of the RCRA, which is cognizable under § 6972(a)(1)(A).") (internal citation omitted); *City of Toledo v. Beazer Materials & Servs., Inc.*, 833 F. Supp. 646, 656 (N.D. Ohio 1993) ("[T]he disposal of wastes can constitute a continuing violation so long as no proper disposal procedures are put into effect or as long as the waste has not been cleaned up and the environmental effects remain remediable."); *Gache v. Town of Harrison*, 813 F. Supp. 1037, 1041–42 (S.D.N.Y. 1993) ("The environmental harms do not stem from the act of dumping when waste materials slide off the dump truck but rather after they land and begin to seep into the ground, contaminating soil and water. So long as wastes remain in the landfill threatening to leach into the surrounding soil and water, a continuing violation sure may exist."); *Acme Printing Ink Co. v. Menard, Inc.*, 812 F. Supp. 1498, 1512 (E.D. Wisc. 1992) ("RCRA includes in its broad definition of 'disposal' the continuous leaking of hazardous substances. . . . Accordingly, leaking of hazardous substances may constitute a continuous or intermittent violation of RCRA."); *Fallowfield Dev. Corp. v. Strunk*, No.

89–8644, 1990 WL 52745 (E.D. Pa. 1990) ("If a person disposes of hazardous waste on a parcel of property, the hazardous waste remains in that property insidiously infecting the soil and groundwater aquifers. In other words, the violation continues until the proper disposal procedures are put into effect or the hazardous waste is cleaned up."). It is particularly notable that these cases were all decided under subsection (A); in contrast to subsection (B), section 7002(a)(1)(A) does not include any reference to liability for past actions or for prior owners. *Compare*, 42 U.S.C. 6972(a)(1)(A) and (B). In reaching their holdings, therefore, the courts necessarily relied [solely] on the reach of the statutory definition of "disposal," which is at the heart of EPA's authority to regulate inactive CCR surface impoundments.

Courts have also addressed the limits of RCRA's definition of "disposal" is in the context of an EPA action under RCRA section 7003. Section 7003 authorizes EPA to obtain injunctive relief for actions, including disposal that "may present an imminent and substantial endangerment to health or the environment." 42 U.S.C. 6973(a). Several courts have evaluated whether an inactive disposal site, where no affirmative acts of disposal are occurring, constitute an "imminent and substantial endangerment" under this provision. Once again, most courts accept a definition of disposal that encompasses leaking or contaminant migration from previously discarded wastes. *See United States v. Price*, 523 F. Supp. 1055, 1071 (D.N.J. 1981), *aff'd United States v. Price*, 688 F.2d 204 (3rd Cir. 1982) ("There is no doubt, however, that [section 7003] authorizes the cleanup of a site, even a dormant one, if that action is necessary to abate a present threat to the public health or the environment.") *citing* S. Rep. No. 96–848, 96th Cong., 2d Sess., at 11 (1980); H. R. Rep. 96–1016 (Part I), 96th Cong., 2d Sess., at 21 reprinted in [1980] U.S. Code Cong. & Ad. News, 6119, 6124; *United States v. Waste Indus.*, 734 F.2d 159 (4th Cir. 1984) (Rejecting district court interpretation that disposal only includes "active human conduct" based on the inclusion of "leaking" in the definition of disposal, and interpreting the "movement of the waste after it has been placed in a state of repose [to be] encompassed in the broad definition of disposal"); *United States v. Diamond Shamrock Corp.*, 12 Env'tl. L. Rep. 20819, 20821 (N.D. Ohio May 29, 1981) (noting that "a disposal clearly requires no active human conduct"); *United States v. Conservation Chemical Co.*,

⁴² Under RCRA's financial assurance regulations, owners and operators of hazardous waste facilities must document that they have sufficient resources to close their facilities and pay third-party claims that may arise.

619 F. Supp. 162, 200 (D. Mo. 1985) ("disposal" occurs . . . when [wastes] migrate from their initial location"). See also S. Rep. 98-284, p. 58 (98th Cong. 1st Sess.) ("The Environmental Protection Agency and the Department of Justice have used the equitable authority and [sic] granted in section 7003 to seek court orders directing those persons whose past or present acts have contributed to or are contributing to the existence of an imminent and substantial endangerment to abate such conditions. This has been an intended use of the section 7003 since 1976. . . . An [sic] evidenced by the definition of 'disposal' in section 1004(3), which includes the leaking of hazardous wastes, section 7003 has always provided the authority to require the abatement of present conditions of endangerment resulting from past disposal practices, whether intentional or unintentional.").

While EPA continues to maintain that the statutory definition of disposal does in fact authorize regulation of inactive CCR surface impoundments, this is not the sole basis for that authority. Under section 1008(a)(3), EPA is authorized to establish criteria governing solid waste management, which includes the "storage" of solid waste. 42 U.S.C. 6904(28) and 6908(a)(3). RCRA's definition of "storage" is limited to hazardous waste; under subtitle D, therefore, the definition Congress intended was the dictionary definition, which incontrovertibly covers the activities associated with continuing to maintain CCR in inactive surface impoundments. For example, Merriam Webster defines "storage" as "the state of being kept in a place when not being used" and "the act of putting something that is not being used in a place where it is available, where it can be kept safely, etc."

Finally, consistent with the proposed rule and the final Regulatory Determination in Unit IV.B of this document, the final rule does not apply to CCR that is beneficially used.

6. Beneficial Use

The proposed rule generally distinguished between the disposal of CCR and the beneficial use of CCR. Disposal activities would be subject to regulation under one of two alternative regulatory schemes. But under either alternative, beneficial use would remain Bevill exempt and would not be subject to regulation. The proposal identified specific criteria that would be used to distinguish between legitimate beneficial uses of CCR and the disposal of CCR. These criteria were largely drawn from the approach contained in

the May 2000 Bevill Regulatory Determination. The criteria were:

—The material used must provide a functional benefit. For example, CCR in concrete increases the durability of concrete—and is more effective in combating degradation from salt water; synthetic gypsum serves exactly the same function in wallboard as mined gypsum, and meets all commercial specifications; CCR as a soil amendment adjusts the pH of soil to promote plant growth.

—The material substitutes for the use of a virgin material, conserving natural resources that would otherwise need to be obtained through practices, such as extraction. For example, the use of FGD gypsum in the manufacture of wallboard (drywall) decreases the need to mine natural gypsum, thereby conserving the natural resource and conserving energy that otherwise would be needed to mine natural gypsum; the use of fly ash in lieu of Portland cement reduces the need for cement. CCR used in road bed replace quarried aggregate or other industrial materials.

—Where relevant product specifications or regulatory standards are available, the materials meet those specifications, and where such specifications or standards have not been established, they are not being used in excess quantities. For example, when CCR is used as a commercial product, the amount of CCR used is controlled by product specifications, or the demands of the user. Fly ash used as a stabilized base course in highway construction is part of many engineering considerations, such as the ASTM C 593 test for compaction, the ASTM D 560 freezing and thawing test, and a seven day compressive strength above 2760 kPa (400 psi). If excessive volumes of CCR are used—i.e., greater than were necessary for a specific project,—that could be grounds for a determination that the use is not beneficial, but rather is being disposed of. (75 FR 35162–35163).

EPA explained that in the case of agricultural uses, CCR would be expected to meet appropriate standards, constituent levels, prescribed total loads, application rates, etc. EPA has developed specific standards governing agricultural application of biosolids. While the management scenarios differ between biosludge application and the use of CCR as soil amendments, EPA stated that the Agency would consider application of CCR for agriculture uses not to be a legitimate beneficial use if they occurred at constituent levels or loading rates greater than EPA's biosolids regulations allow. (75 FR 35162–35163, June 21, 2010)

EPA proposed to codify these criteria in the term, "beneficial use of coal combustion products (CCPs)." This definition stated that the beneficial use of CCPs was the use of CCPs that provides a functional benefit; replaces the use of an alternative material, conserving natural resources that would otherwise need to be obtained through practices such as extraction; and meets relevant product specifications and regulatory standards (where these are available). CCPs that are used in excess quantities (e.g., the field-applications of FGD gypsum in amounts that exceed scientifically-supported quantities required for enhancing soil properties and/or crop yields), placed as fill in sand and gravel pits, or used in large scale fill projects, such as restructuring the landscape, are excluded from this definition. (75 FR 35129–35130, June 21, 2010).

Commenters generally supported the criteria in the proposal but raised concern that the criteria lacked specificity; some commenters stated that the criteria were those that states already considered in doing their beneficial use determination. Commenters also suggested the use of a "no toxics" provision and others suggested that the criteria include a requirement that "environmental benefits" be achieved. A more general comment raised by several commenters was that the proposed criteria failed to establish any standard that ensured protection of human health and the environment. Finally, one commenter raised concern that EPA's approach to beneficial use, and particularly to large scale fill operations, inappropriately assumed that these operations constituted the disposal of solid waste, which, the commenter claimed was inconsistent with a series of judicial decisions.

There are generally three critical issues in determining whether a material is regulated under RCRA subtitle D: whether the material is a "solid waste," whether the activity constitutes "disposal," and whether regulation of the disposal is warranted. Although there can be some overlap between these issues in that the same facts may be relevant to each of them, understanding the distinction between them is critical to understanding the final approach to the beneficial use of CCR adopted in this rulemaking.

In order to be subject to RCRA, the material must be a solid waste. The statute defines a solid waste as "any garbage, refuse . . . and other discarded material. . . ." 42 U.S.C. 6903(27). As EPA noted in the proposed rule, for some beneficial uses, CCR is a raw